

WASTE OF IRRIGATION

Much Loss Can Be Avoided by Preparation of Ground.

Much Dreaded Evaporation Can Be Avoided by Using Water in Reservoir During Early Months and Then Filling Again.

How much water did you waste during the last precious run? "Didn't waste any—not a drop got out of my field." This may be true and still you wasted water. It went down instead of off—and whenever water soaks down one, two, yes, even five feet in spots, it is wasted. This can only be avoided by more careful preparation of the ground. In California I found the bottom and sides of many supply laterals cemented and the fields were prepared as carefully as a lawn tennis ground in Colorado. This was true even in the alfalfa fields. The old middle furrows and back furrows were entirely obliterated, men worked over the fields with hand graders after the levels had been used, and every depression was filled and every knoll leveled. The result was that when water was turned on it spread as on a floor.

In Colorado the irrigator is waiting half the time for his head of water to wet up the high spots, forgetting that all this time the water is injuring the crop on the low spots and will in time ruin the land. When we get down to thorough intensive farming and gardening our whole country will change its nature and appearance. I mean by this intensive alfalfa crops, intensive wheat and oats, as well as intensive gardening, writes D. C. Roberts in the Denver Field and Farm. This will require the breaking up of our big ranches into 10, 20 and 40-acre lots, with a man working intensely on every five or ten acres, and this will also require a more constant supply of water—not more water necessarily, but more frequent runs.

With our present water facilities kept in good repair and under careful supervision, there is no excuse for lack of water even in the driest seasons. Some water should be in the canal all the time during the planting and seeding months of spring. If a reservoir is filled in winter there is no need of letting it seep and evaporate during the hot season—use it up first—say in April and May. It can be again filled in June for August irrigation. By this means the dreaded evaporation so much talked about could be avoided. All we need to make this fair and rich land blossom as the rose is a little practical management.

I often wonder why people do not mulch more in their gardens and around lawn shrubs and plants. The benefits are two-fold. First, if manure is used it leaches into the soil and fertilizes it. Second, it keeps the surface roots moist and hence vigorous. In the hot sandy lands of Florida advantage is taken in a similar manner by piling leaves weighted down around the plants, thus conserving the moisture as well as protecting the roots from the excessive heat of the sun. An excellent way to keep strawberry plants productive and thrifty is to make quite deep furrows between the rows and fill them with straw, stable manure, well tramped down. This will keep down the weeds as well as fertilize the plants and the same rule applies quite as well to all the bush fruits.

Water can be run through the rows slowly—or if by hose, can be sprayed thoroughly. Clean straw or boards can be put closely around the strawberry plants to keep the berries from sanding. I see a few Pingree farms in our town lots, but wish to see more of them. The little back yard 25x100 feet will produce strawberries, raspberries, peas, beans, lettuce, onions, asparagus, rhubarb, for a good-sized family and then the fun is thrown in extra. Who does not enjoy the early morning inspection to see how much the plants have grown during the night, what new seeds have germinated and the prospect of those delicious meals all from one's own garden. And I must not forget the delectable radish, never good unless pulled fresh from the ground and taken without delay to the breakfast table. To the man who will do these things I want to repeat the Irishman's toast, "May you live to eat the chicken that scratches over your grave."

Ideal Place for Chickens.
The ideal place to raise chickens is on an alfalfa or clover patch, or at the end of a corn, mangel or turnip patch, where insect life is fairly abundant. Chickens raised on free range with hens or with brooders will always be healthy, strong and vigorous, and they develop quicker than those raised on a limited range.

High-Class Ewes Best.
Why not buy a couple of high-class ewes? A few years hence you will be able to give your boy a nice little flock of ewes, in the meanwhile raising your own rams, selling the surplus to your neighbors, doing a little missionary work, and they cost no more to raise than the kind that are just "sheep."

Best Showing of Cow.
The best showing a dairy cow can make is a high rating under the Babcock test.

Select Gilts for Breeding.
Now is the time to select some choice gilts for brood sows.

IRRIGATION NEEDED IN EAST

Many Farmers in Humid Portion of Country Assured of Profitable Crops by New Method.

If a farmer could at a reasonable expense secure an insurance policy, guaranteeing him an indemnity against loss of his crops through drought, there would be thousands who would jump at the chance. The chance is here, explain officials of the department of agriculture, but the number who take advantage of it are few.

In the east and more humid portions of the United States where land values are high, the intensive system of agriculture is rapidly replacing the extensive. A system of mixed husbandry has been largely replaced by special branches of farming. The many thriving manufacturing cities and towns that are being built up have caused a great demand for fruit and vegetables. The high value per acre and the active and increasing demand for fresh fruits and vegetables have induced many farmers to enter upon the production of these crops, and they are the ones who need crop insurance. This can be secured through the establishment of a simple irrigation plant.

Where the cost of cultivation is large the losses from drought are felt all the more severely, as the expenses are essentially the same whether a half crop or a full one is harvested. Losses of from one to two hundred dollars per acre as a result of a few weeks' drought are not uncommon in the east. The experience of practical men and experiments by a number of the state stations indicate that an investment in an irrigation plant where market garden crops and small fruits are grown will pay exceptionally good interest.

Mr. Milo B. Williams of the department of agriculture, who is in charge of irrigation investigations in the humid region, has compiled a table showing the number of days when irrigation was required during the ten years from 1900 to 1909, inclusive, in representative points in the humid region. For instance, at Ames, Ia., irrigation was necessary 190 days during this period; Oshkosh, Wis., 292 days; Vine land, N. J., 352 days; Columbia, S. C., 268 days, and Selma, Ala., 724 days. Mr. Williams arrives at this conclusion by determining that crops need water after every dry period of not less than 15 days, so that each and every day included in the table represents periods that the drought extended over the 15-day period.

While the humid region farmer has not the largest water supplies that may be available for the arid land farmer, he has many smaller streams which may be developed cheaply. Streams varying in size from creeks to large rivers are usually available for pumping purposes; ponds and lakes have few other uses than for irrigation.

The process of applying water to crops by distributing it through the fields under pressure which will spray it into the air and let it fall like a gentle rain has great possibilities in the humid region. A spray system will distribute water evenly over the surface of rough or rolling lands, regardless of soil or underground conditions. Crops completely covering the ground can in this way be irrigated without damage. Spray irrigation is also well adapted to those humid conditions which demand small and frequent applications of water in the preparation of the soils for setting out young plants and keeping them growing through the dry spell, or for softening the surface to aid in weeding and cultivation.

Investigations made by Mr. Williams have demonstrated that irrigation is profitable for truck, berries and other high-priced crops in all parts of the humid region, as well as for citrus fruits in Florida. There are but few years, he says, when increased yield for such crops as strawberries, celery, etc., would not pay the interest on the first cost and the depreciation of the plant, while in such years as 1910 and 1911, when many sections were without rain for two months, the yields for a single year might be sufficient to pay for the entire system.

GENERAL FARM NOTES

The supply of good 1,500 to 1,800 pound work horses is always behind the demand.

For horses doing a considerable amount of road work there is no grain equal to oats.

A properly trained horse will stop as soon as anything goes wrong with the harness or his shoes.

A cow producing average testing milk should yield from 7,000 to 8,000 pounds of milk in a year.

Deal gently with the cow of nervous temperament. She usually is one of the best in your herd.

Gentleness and patience with the heifer that has calved for the first time will win out every time.

The weeder is a most effective tool in that it takes every small weed in its path as well as to pulverize many small clods.

The pig is merely a meat-producing machine, and the more he is fed with good judgment, of course—the more meat he will turn over.

Ewes that are broad and long will make good mothers and produce vigorous offspring. In this way lambs of a better type will be produced.

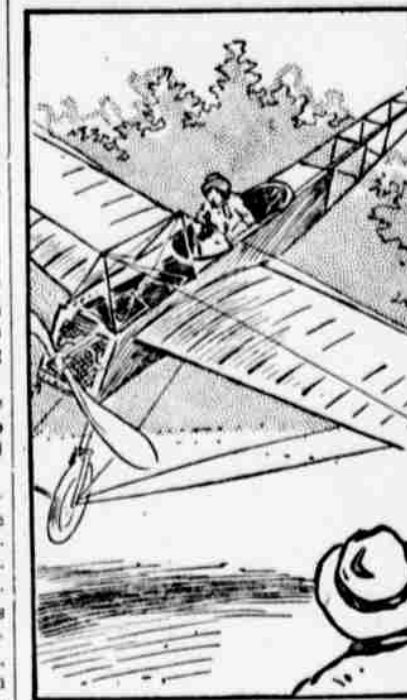
The ducks are easily confined with a low fence; they rarely fly over a fence, though they will crawl under a very small opening. They need clean, dry straw to sleep on.

GIRL LEAPS CLEAR AS MACHINE FALLS

Carried Aloft Involuntarily, Only Her Nimble Jump Prevents Death Amid Wreckage.

New York.—Miss Bernetta Muller of 39 West Sixty-seventh street, whose home is in Canton, O., has been a pupil of an aviation school at Mineola, L. I., for the past week, but had only been permitted to drive a monoplane on the ground. The "elevator" of the machine had been kept tied down so that no mischance might send the craft soaring into the air.

When Miss Muller started out the other morning she thought the usual provision against sudden flight had been made, but in her absence some one had tampered with the bonds and the "elevator" was quite free to go



Dropped Like a Spent Rocket.

into action if the right lever were moved.

The girl had been driving over the lawn for several minutes when she inadvertently grasped the lever that put the flying mechanism into play. Instantly the craft started heavenward.

Miss Muller was frightened. She jerked furiously at one lever after another, but in a twinkling the plane was 20 feet in the air.

Then the girl of twenty-two, realizing that she was powerless to stop upward flight, decided to take chances on coming down and shut off the motor.

The machine, with the motor stopped, dropped earthward like a spent rocket. The girl made no attempt to guide the downward plunge, but just when another instant would have seen her crushed amid the wreckage of the steel car, she seemed to gather her wits. The bystanders heard a little cry and then the girl's body shot out and landed a few feet from the monoplane, just as it crumbled into a twisted mass of steel. She had tried to jump clear of the wreckage and her success had saved her life.

PIRATES SEIZE ITALIAN BARK

Crew of Ship Then Forced into Small Boats Without Water or Provisions.

New York.—When the steamer Allemania arrived in port the other day, a thrilling story of shipwreck and attack by pirates was told by 13 sailors of the Italian bark Genoa, on board the Allemania, and rescued by the latter boat when in a desperate plight at Inagua, the Bahamas.

After working the pumps for several days, the crew were on the point of de-



A Fight Ensued.

serting the bark and taking to the boats when a number of small boats came alongside, and the occupants of these boats, numbering more than 100, armed with guns and revolvers, boarded the Genoa, and ordered the crew to surrender. An attempt was made by the crew to scuttle the Genoa, and a fight ensued in which the defenders were badly worsted. They were then ordered into the small boats, without water or provisions.

After rowing aimlessly for two days, the crew of the Genoa made land at one of the smaller Bahamas and hoisted a signal of distress, which was seen by the Allemania's lookout.

ROOSEVELT AND JOHNSON CHOSEN

DELEGATES SING HYMNS AS THEY CHOOSE LEADERS OF THE NEW PARTY.

Two Candidates Depart From Tradition by Appearing Before Convention to Be Notified and to Voice Their Acceptance.

Chicago.—The first national convention of the new Progressive party was adjourned at 7:27 p. m. on Wednesday, after Colonel Theodore Roosevelt had been chosen as the party's candidate for president and Governor

nominating them was due to the large number of seconding speeches allowed.

As has always been the case in national political conventions, the bulk of the work of the Progressive gathering was carried on in the committees. Only a semblance of a conflict of opinion on the floor was a brief debate Wednesday as to whether an hour's recess should be taken. The point was immaterial; but as one delegate expressed it, "We just had to fight about something to make it a regular convention."

There was sharp discussion, however, in several committee meetings and no little difficulty in agreeing



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THEODORE ROOSEVELT

Hiram W. Johnson of California had been selected as his running mate. Singing "Onward Christian Soldier" and the "Battle Hymn of the Republic," the delegates pledged their fealty to their party leaders.

Marking a new departure in the proceedings of national conventions, the two candidates immediately were notified of their nomination and in the midst of deafening cheers they appeared before the delegates to voice their acceptance and to pledge their best efforts to the coming campaign.

For several hours during the afternoon and early evening the throng in the Coliseum had listened to a flow of oratory in nominating and seconding speeches, in which the dominant note expressed was the belief that victory would come to the new party in November.

Reynold Robbins of Illinois pledged a 100,000 majority for the national ticket in Illinois, and Gifford Pinchot predicted a 300,000 majority for Colonel Roosevelt and Governor Johnson in his home state of Pennsylvania. These statements were cheered to the echo.

The party formally christened itself "the Progressive party," leaving out the prefix "national" by which it has heretofore been known, but provision was made for the recognition of "real" progressives in any of the states by whatever name they should be locally designated because of state laws.

During the three days it was in session, there was not a roll call nor a ballot. The delegates asked no such formalities, either in placing their candidates in nomination or in voting for them. There was not a voice of opposition, either to Colonel Roosevelt or Governor Johnson. The delay in

upon the platform as finally adopted. Colonel Roosevelt worked with the sub-committee in charge of the platform until late Wednesday afternoon, going over their work of the two previous days and nights and vigorously helping to mould the draft which at last proved acceptable to him. The platform did not take up the negro question.



H. W. JOHNSON

Miss Jane Adams of Hull house, Chicago, was among those who seconded Colonel Roosevelt. She was greeted enthusiastically.

The new party formally placed itself on record as favoring equal suffrage and further recognized the suffrage movement by providing for four women members-at-large on the national committee.

Aged Veteran Dies.

Elizabeth, N. J.—Colonel George H. Sweet, a veteran of the Mexican and civil wars, is dead at his home, "The Maples," at the age of 81. He served under General Scott in the Mexican war.

After the Beef Trust.

Washington.—Soaring prices of beef and other meats have attracted the attention of the federal government, and may have the effect of hurrying on the investigation of the so-called beef trust.

Fighting in China.

London.—Severe fighting has broken out at Wu Chang, in the Chinese province of Hu-Peh, according to a news agency dispatch received here from Tien-Tsin. The trouble arose over the disbanding of some of the troops.

Linotype President Seeks Divorce.

Reno, Nev.—Phillip T. Dodge, president of the Mergenthaler Linotype company of New York, has filed a suit for divorce from Margaret B. Dodge, who is now in New York. The complaint charges desertion.

AROUND THE MINES

Tonopah ore shipments exceed in tonnage and values all previous records.

Barry-Cox on Scott hill, Park City, Utah, is now mining eight to ten tons of ore a day, or about five carloads every thirty days.

Ore shipments from the Park City district for the week just ended amounted to a total of 2,500,680 pounds, valued at approximately \$50,000.

A new shoot of very fine ore opened up on the thirteenth level of the Belmont mine at Tonopah. The shaft vein on the eleventh level also showing a good body of fine ore.

Gold Circle, in northern Nevada, is right now in a very critical stage of its existence, with a number of important deals pending which may prove of inestimable benefit to the camp.

Ore shipments from the Tintic district for the past week again came close to the record week in the fore part of March, when 295 carloads were shipped. The last week's total was 197 cars.

The production of borax in 1911 was the largest in the history of the United States, except that for 1906, when the output was 68,173 short tons, but the value of the production in 1911 was greater.

Recent discovery of large bodies of tungsten and bismuth ore in the western part of Utah is one of the most convincing evidences of the wonderful mineral possibilities of that section of the state.

A most excellent report is to hand this week from both the Belmont mill and mine, the latter developing most satisfactorily on all levels and especially in the deepest workings of the property, says the Tonopah Miner.

It is reported that some of the old slag dumps in the vicinity of Stockton have been carefully sampled this summer and that several of them have been found to contain sufficient values to make them profitable to ship to the near-by smelters.

Whether the interests of Utah mine owners and operators can best be served through the American Mining congress or through a new organization of mining men was discussed at a meeting at the Salt Lake Commercial club last week.

The superintendent of the Yankee Consolidated reports that several carloads of zinc ore have been extracted and that more is in sight. The new rate of \$7.30 a ton from camp to the Kansas zinc smelters is stimulating the search for this metal.

Since paying the first dividend of 25 cents a share, amounting to \$37,500, in 1892, the yearly amount distributed by the Silver King at Park City was steadily increased until in 1901 it reached \$1,300,000, which was maintained for four years.

Indications once more are favorable for a road to Contact, judging from the personnel of a crowd of Western Pacific officials who recently made a trip by automobile from Wells up through that big copper district and on into the Twin Falls country.

It is given out that since July 21 the Rico-Wellington has shipped \$25,500 in ore. This totals 850 tons, which nets the company about \$30 a ton. The company is said to have recently entered into a contract for marketing 1,000 tons of its \$20 zinc ore at Elend, Colo.

According to the United States geological survey there was considerable increase in the production of borax in the United States in 1911 over that of 1910, the output for last year being of 53,330 short tons, valued at \$1,569,151, as compared with 42,367 tons in 1910, valued at \$1,291,842.

The operations of the Bingham & Garfield railway during the past quarter were very satisfactory in every respect. An average of 10,203 tons of ore per day were hauled, all from the mines to the mills, for the period, as compared with 7,910 tons per day for the previous quarter.

Chino is making remarkable progress and July marks another great stride in its production of copper, the output for this month aggregating 3,300,000 pounds of copper, approximately double that of the preceding month, June, when 1,540,000 pounds of the metal were outputted.

Twenty-five thousand dollars in one chunk was juggled around and handled at the Boise assay office last week. The chunk was one of the biggest bars of gold received at the local office in some time, and it came from an Idaho placer mine. The brick was reasonably pure and assayed around \$17 to the ounce.

During the first seven months of the present year 124 American mines and metallurgical works, according to figures compiled by Mining and Engineering World, participated in dividend disbursements totaling \$53,167,685, which with the \$10,821,025 disbursed by securities holding corporations brings the total for the period to \$63,988,710.

Showing a production of 28,372,038 pounds of copper for the quarter ending June 30, and a cost of 8.27 cents a pound, compared with a cost of 8.83 cents in the previous quarter, the second report for the year was given out last week by the Utah Copper company.

The production of silver in Nevada in 1911 was more than in any previous year, being 13,184,601 fine ounces, valued at \$6,987,839 against 12,479,871 fine ounces, valued at \$6,739,130, in 1910. About ninety-seven per cent came from siliceous ores.